



SHEET 1 OF 7

FORM PTO - 1449				ATTY DOCKET NO. ASC-061					
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT				APPLICANTS: Lochtefeld et al.					
				SERIAL NO.: 10/629,498					
				FILING DATE: July 29, 2003					
				GROUP: Not yet assigned					
U.S. PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
75/KS	A2	4,885,614	12/5/1989	Furukawa et al.					
	A3	5,032,893	7/16/1991	Fitzgerald et al.					
	A4	5,084,411	1/28/1992	Laderman et al.					
	A5	5,091,767	2/25/1992	Bean et al.					
	A6	5,156,995	10/20/1992	Fitzgerald et al.					
	A7	5,256,550	10/26/1993	Laderman et al.					
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
75/KS	C4	Akatsu et al., "Wafer bonding of different III-V compound semiconductors by atomic hydrogen surface cleaning," <u>Journal of Applied Physics</u> , Vol. 90, No. 8 (October 15, 2001), pp. 3856-3862.							
	C5	Belgal et al., "A New Mechanism of Pipeline Defect Formation in CMOS Devices," <u>International Reliability Physics Symposium</u> , (1994), pp. 399-404.							
	C6	Bulsara et al., "Relaxed InxGal-xAs graded buffers grown with organometallic vapor phase epitaxy on GaAs," <u>Applied Physics Letters</u> , Vol. 72, No. 13 (March 30, 1998), pp. 1608-1610.							
	C7	Cullis et al., "Growth ripples upon strained SiGe epitaxial layers on Si and misfit dislocation interactions," <u>Journal of Vacuum Science and Technology</u> , A 12(4) (July/August 1994), pp. 1924-1931.							
	C8	Currie et al., "Carrier mobilities and process stability of strained Si n- and p-MOSFETs on SiGe virtual substrates," <u>Journal of Vacuum Science and Technology</u> , B 19(6) (November/December 2001), pp. 2268-2279.							
EXAMINER 75/LB					DATE CONSIDERED 5/25/06				



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U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
ZKS	A8	5,323,031	6/21/1994	Shoji et al.			
	A9	5,659,187	8/19/1997	Legoues et al.		3	
	A10	5,801,085	9/1/1998	Kim et al.			
	A11	5,810,924	9/22/1998	Legoues et al.			
	A12	5,828,114	10/27/1998	Kim et al.			
	A13	5,937,274	8/10/1999	Kondow et al.			

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
ZKS	C9	De Boeck et al., "Growth and structural characterization of embedded InAsSb on GaAs-coated patterned silicon by molecular beam epitaxy," <u>Applied Physics Letters</u> , 58 (9) (March 4, 1991), pp. 928-930.							
	C10	Feenstra et al., "Scattering from strain variations in high-mobility Si/SiGe heterostructures," <u>Journal of Applied Physics</u> , 78 (10) (November 15, 1995), pp. 6091-6097.							
	C11	Fitzgerald et al., "Dislocation dynamics in relaxed graded composition semiconductors," <u>Materials Science and Engineering</u> , B67 (1999), pp. 53-61.							
	C12	Godbey et al., "A Si0.7Ge0.3 strained-layer etch stop for the generation of thin layer undoped silicon," <u>Applied Physics Letters</u> , 56 (4) (January 22, 1990), pp. 373-375.							
	C13	Gonzales et al., "Advantages of thin interfaces in step-graded buffer structures," <u>Materials Science and Engineering</u> , B44 (1997), pp. 41-45.							

EXAMINER	DATE CONSIDERED 5/25/06
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FORM PTO - 1449 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT				ATTY DOCKET NO. ASC-061 APPLICANTS: Lochtefeld et al. SERIAL NO.: 10/629,498 FILING DATE: July 29, 2003 GROUP: Not yet assigned				
U.S. PATENT DOCUMENTS								
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
JSKS	A14	6,576,532	6/10/2003	Jones et al.				
JSKS	A15	US 20020185686A	12/12/2002	Christiansen et al.				
FOREIGN PATENT DOCUMENTS								
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
OTHER ART, JOURNAL ARTICLES, ETC.								
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)							
JSKS	C14	Gray et al., "Effect of Anisotropic Strain on the Crosshatch Electrical Activity in Relaxed GeSi Films," <u>Physical Review Letters</u> , Vol. 86, No. 16 (April 16, 2001), pp. 3598-3601.						
	C15	Ha et al., "Anomalous Junction Leakage Current Induced by STI Dislocations and Its Impact on Dynamic Random Access Memory Devices," <u>IEEE Transactions on Electron Devices</u> , Vol. 46, No. 5 (May 1999), pp. 940-946.						
	C16	Knall et al., "The use of graded InGaAs layers and patterned substrates to remove threading dislocations from GaAs on Si," <u>Journal of Applied Physics</u> , 76 (5) (September 1, 1994), pp. 2697-2702.						
	C17	MacElwee et al., "High-Performance Fully Depleted Silicon-on-Insulator Transistors," <u>IEEE Transactions on Electron Devices</u> , Vol. 37, No. 6 (June 1990), pp. 1444-1451.						
EXAMINER JSKS				DATE CONSIDERED 5/25/06				



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FORM PTO - 1449	ATTY DOCKET NO. ASC-061
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EXAM. INIT.	DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)							
JS	C18	McCarthy et al., "Effect of threading dislocations on AlGaIn/GaN heterojunction bipolar transistors," <u>Applied Physics Letters</u> , Vol. 78, No. 15 (April 9, 2001), pp. 2235-2237.						
	C19	Meshkinpour et al., "Role of misfit dislocations on pseudomorphic high electron mobility transistor," <u>Applied Physics Letters</u> , 66 (6) (February 6, 1995), pp. 748-750.						
	C20	Mica et al., "Crystal defects and junction properties in the evolution of device fabrication technology," <u>Journal of Physics: Condensed Matter</u> , 14 (2002), pp. 13403-13410.						
	C21	Mormose et al., "Dislocation-free and lattice-matched Si/GaP1-xNx/Si structure for photo-electronic integrated systems," <u>Applied Physics Letters</u> , Vol. 79, No. 25 (December 17, 2001), pp. 4151-4153.						
✓	C22	Mooney et al., "Scanning x-ray microtopographs of misfit dislocations at SiGe/Si interfaces," <u>Applied Physics Letters</u> , Vol. 79, No. 15 (October 8, 2001), pp. 2363-2365.						

EXAMINER JS	DATE CONSIDERED 5/25/06
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FOREIGN PATENT DOCUMENTS

EXAM. INIT.	DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)							
JSKS	C23	Mooney et al., "SiGe TECHNOLOGY: Heteroepitaxy and High-Speed Microelectronics," <u>Annual Review of Materials Science</u> , 30 (2000), pp. 335-362.						
	C24	Mooney et al., "Thermal Stability of Strained Si on Relaxed Si _{1-x} Ge _x Buffer Layers," <u>Materials Research Society Symposium Proceedings</u> , Vol. 686 (2002), pp. A1.2.1-A1.2.6.						
	C25	Morris et al., "Structure property anisotropy in lattice-mismatched single heterostructures," <u>Journal of Applied Physics</u> , 71 (5) (March 1, 1992), pp. 2321-2327.						
	C26	Ohashi et al., "Simulation of dislocation accumulation in ULSI cells with STI structure," <u>Applied Surface Science</u> , (2003), pp. 1-7.						
	C27	Rammohan et al., "Study of μ m-scale spatial variations in strain of a compositionally step-graded In _x Ga _{1-x} /GaAs(001) heterostructure," <u>Applied Physics Letters</u> , 66 (7) (February 13, 1995), pp. 869-871.						
EXAMINER	JSKS			DATE CONSIDERED 5/25/06				



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FORM PTO - 1449				ATTY DOCKET NO. ASC-061					
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT				APPLICANTS: Lochtefeld et al.					
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				GROUP: Not yet assigned					
U.S. PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
ZKS	C28	Samavedam et al., "Novel dislocation structure and surface morphology effects in relaxed Ge/Si-Ge(graded)/Si structures," <u>Journal of Applied Physics</u> , 81 (7) (April 1, 1997), pp. 3108-3116.							
	C29	Sleight et al., "Stress Induced Defects and Transistor Leakage for Shallow Trench Isolated SOI," <u>IEEE Electron Device Letters</u> , Vol. 20, No. 5 (May 1999), pp. 248-250.							
	C30	Soh et al., "Relation Between Etch Pit Pairs And Pipeline Defects In CMOS Device," <u>International Reliability Physics Symposium</u> , pp. 244-248.							
	C31	Su et al., "Effects of Dislocation and Bulk Micro Defects on Device Leakage," SEMICON Taiwan 2001, pp. 1-4.							
	C32	Thompson et al., "NMOS Device Characteristics in Electron-Beam-Recrystallized SOI," <u>IEEE Transactions on Electron Devices</u> , Vol. 40, No. 7 (July 1993), pp. 1270-1276.							
EXAMINER ZSLH				DATE CONSIDERED 5/23/04					



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	GROUP: Not yet assigned

U.S. PATENT DOCUMENTS

EXAM. INIT.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE

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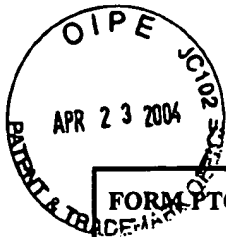
EXAM. INIT.	DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)							
286	C33	Tromp et al., "ADVANCES IN SITU ULTRA-HIGH VACUUM ELECTRON MICROSCOPY: Growth of SiGe on Si," <u>Annual Review of Materials Science</u> , 30 (2000), pp. 431-449.						
	C34	Wang et al., "PIPELINE DEFECTS IN CMOS MOSFET DEVICES CAUSED BY SWAMI ISOLATION," <u>International Reliability Physics Symposium</u> , (1992), pp. 85-90.						
	C35	Williams et al., "Evaluation of the Yield Impact of Epitaxial Defects on Advanced Semiconductor Technologies, 2000 IEEE/SEMI Advanced Semiconductor Manufacturing Conference, pp. 1-7.						
	C36	Wu, "Novel Etch-Stop Materials for Silicon Micromachining," Master of Science Thesis, Massachusetts Institute of Technology, 1997.						
	C37	Yamada et al., "Static analysis of off-axis crystal film growth onto a lattice-mismatched substrate," <u>Applied Physics Letters</u> , Vol. 79, No. 5 (July 30, 2001), pp. 608-610.						
EXAMINER	2704134			DATE CONSIDERED 5/13/04				

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FORM PTO - 1449				ATTY DOCKET NO. ASC-061					
INFORMATION DISCLOSURE STATEMENT				APPLICANTS: Lochtefeld et al.					
				SERIAL NO.: Not yet assigned.					
				FILING DATE: Herewith					
				GROUP: Not yet assigned.					
U.S. PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
73/KS	A1	6,555,880	04/29/2003	Cabral, Jr. et al.					
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
73/KS	C1	Nabarro, <u>Theory of Crystal Dislocations</u> (1967) pp. 33.							
↓	C2	Houghton, "Strain relaxation kinetics in Si _{1-x} Ge _x /Si heterostructures," <u>J. Appl. Phys.</u> , Vol. 70, No. 4 (August 15, 1991) pp. 2136-2151.							
↓	C3	Briel et al., "® "SMART CUT": A Promising New SOI Material Technology," <u>178 Proceedings 1995 IEEE International SOI Conference</u> (October 1995) pp. 178-179.							
EXAMINER 73/KS					DATE CONSIDERED 5/25/06				



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U.S. PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
JSKS	A16	5,357,119	10/1994	Wang et al.					
	A17	5,668,387	09/1997	Streit et al.					
	A18	5,844,260	12/1998	Ohori					
	A19	6,037,615	03/2000	Matsuyama et al.					
	A20	2003/0227057	12/2003	Lochtefeld et al.			10/2002		
	A21	2004/0005740	01/2004	Lochtefeld et al.			06/2003		
	A22	2004/0031979	02/2004	Lochtefeld et al.			06/2003		
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
JSKS	B1	0 402 209	12/1990	EP				N	Y
	B2	0 523 487	01/1993	EP				N	N
	B3	1 197 992	04/2002	EP				N	Y
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
JSKS	C38	International Search Report for International Application No. PCT/US03/23804, 3/15/2004							
EXAMINER JSKS					DATE CONSIDERED 5/25/06				

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